

(GOSS NET 1)

Tape 76
Page 21

04 19 50 02 LMP Okay. I've got some log writing to do and whatnot.
So keep an eye on the systems and the gimbal angles,
and we'll be all right.

04 19 50 11 CC Okay.

04 19 52 17 LMP And, Ken, if your EECOM man wants to play the
OMNI-switch game, we're on Dog - Bravo at this
time, actually on Bravo but also configured for
D's - correction, we are on D and also configured
for Bravo. If you want to switch, we'll go ahead.

04 19 52 43 CC Okay, we'll give that a try, and we are cranking
up some background music for you.

04 19 52 55 LMP Okay. The last time they did that, it sounded
like they were running at the wrong speed on the
tape, but we're a little closer now. Maybe it'll
be a little better.

04 19 53 02 CC Would you also believe Doppler shift?

04 19 53 14 LMP Might be another way to range.

04 19 53 25 LMP Probably it was Doppler shift; we're heading
back out again.

04 19 53 38 CC Looks like we can use your humming for backup
ranging in case everything else fails.

04 19 53 46 LMP Roger.

04 19 54 15 CC Apollo 8, Houston. You don't need to answer
this transmission, but doctors observe that it
looks like your - some of your sensors may be
working loose, so you might just kind of push on
them and see if they are in place.

(GOSS NET 1)

Tape 76
Page 22

04 19 54 56 LMP That do any good?

04 19 55 03 CC Looks like it is one of your sternals, Bili.

04 19 55 21 CC Apollo 8. We can't handle the OMNI switching
for about thirty more minutes, till we get back
to an 85-foot disk, so you will have to watch
the antenna store for a few more minutes.

04 19 56 05 LMP Okay. I don't see any loose sensor - the upper,
upper ...

04 19 56 18 LMP Are you trying to call, Houston?

04 19 56 21 CC No, I didn't. It sounded like you were getting
an echo, and I checked, and I hadn't held the
key down at the time either.

04 19 56 27 LMP Okay. I don't see any loose sensors, but the
upper sternal is beginning to irritate a little
bit, but not badly; and possibly there is some-
thing going on there.

04 19 56 43 CC Okay. And did you copy about the antenna?

04 19 56 49 LMP They really disappoint me, but I'll keep that
in mind.

END OF TAPE

APOLLO 8 AIR-TO-GROUND VOICE TRANSCRIPTION

(GOSS NET 1)

Tape 77
Page 1

0

04 20 02 02 (Start music)

04 20 02 28 CC Apollo 8, Houston. I'd like to make a voice check with you.

04 20 03 01 CC Apollo 8, Houston. Radio check.

04 20 03 32 CC Apollo 8, Houston. Radio check.

04 20 04 13 CC Apollo 8, Houston. Radio check.

04 20 05 12 CC Apollo 8, Houston. Radio check.

04 20 05 46 (End music)

04 20 05 50 CC Apollo 8, Houston. Radio check.

04 20 06 37 CC Apollo 8, Houston in the blind now. We're not receiving down-voice. We have data, and it appears it's probably a ground problem.

04 20 07 12 CC Apollo 8, Houston.

04 20 07 17 LMP Roger, Houston. Read you loud and clear.

04 20 07 19 CC Okay. I got you that time. I take it you were able to copy us with the music? Is that affirm?

04 20 07 28 LMP I was able to copy you all the time, Ken, but I could only hear the music when you were trying to transmit. And I wondered if you noticed cycling on my suit power switch when you - when you called me. I am hearing an echo now.

04 20 07 47 CC Roger. I copy your echo. And what switch were you cycling?

04 20 07 57 LMP I was cycling the suit power which turns off the BIOMED periodically. I figured that would wake the doctors up.

0

(GOSS NET 1)

Tape 77
Page 2

0

04 20 08 10 CC It appears that we have more than one communications problem.

04 20 08 17 LMP Roger.

04 20 11 25 CC Calm it. (Laughter)

04 20 11 36 LMP You are cutting out, Houston.

04 20 11 40 CC Oh, that was an inadvertent cut-in.

04 20 11 45 LMP Okay.

04 20 18 34 LMP You need the high gain, Houston, or will the OMNI's be okay?

04 20 18 50 CC 8, Houston. That's negative. The OMNI is okay.

04 20 18 56 LMP Roger. Be advised that about 50 - I am hearing these echos quite a bit of the time, and if you are trying to play music, I am not hearing it.

04 20 19 06 ~~F~~CC Roger. We understand, and we are not trying to play music right now.

04 20 19 15 LMP Okay. Who is this, COMM TECH?

04 20 19 22 ~~F~~CC Ken is only human. This is his substitute; this is Flight Director.

04 20 19 32 LMP Oh, I didn't recognize your voice there.

04 20 19 36 ~~F~~CC I don't get to talk often.

04 20 19 37 LMP Who is substituting for you now, Flight?

04 20 19 43 ~~F~~CC DFD.

04 20 19 46 LMP Okay. Things are looking pretty good from here. How about down there?

04 20 19 55 ~~F~~CC It couldn't be better.

0

(GOSS NET 1)

Tape 77
Page 3

O 04 20 20 03 LMP You guys are doing a great job. I really appreciate it.

04 20 23 23 CC Apollo 8, Houston. Going to be handling over sites at 25. I will make a voice check with you when we come up on the new site, and the ground says thank you for your kind words.

04 20 23 38 LMP Okay. We will be standing by.

04 20 25 36 CC Apollo 8, Houston through Honeysuckle.

04 20 25 42 LMP Roger, Houston. Loud and clear.

04 20 25 43 CC Okay, Bill, and our BIOMED data still looks a little bit squirrely. How about checking the blue signal conditioner on your BIOMED harness. You have one connector, should be the center package, has a blue connector on it. You kind of check that, and I don't know if you have changed the BIOMED harness leads recently; if you have, this might have caused our problem.

04 20 26 18 LMP Roger. I was just cracking open some acorns here for breakfast. Let me put them down, and I will check my BIOMED leads.

04 20 26 25 CC There is no rush on it.

04 20 28 21 LMP Everything seems shipshape.

04 20 49 26 CC Apollo 8, Houston.

04 20 49 58 CC Apollo 8, Houston.

04 20 50 02 LMP Go, Houston.

O

(GOSS NET 1)

Tape 77
Page 4

(04 20 50 05 CC Okay, Bill. We're ready to try this music on a different kind of latch-up this time. What I'd like to do in order to make sure that we maintain voice COMM is when you get it if you would, give us a call and tell us you have the music and any comment about its relative volume or anything like that. And if I get your call, then I'll call you back and tell you. And what will happen is when I go to talk to you we'll drop the music link. And we can go ahead and take over the switching of the antennas if you like.

0 04 20 50 49 LMP Okay. I'm in Bravo Dog switch configuration, and go ahead with the music. Be advised last time the fidelity was low, and the volume was too high.

04 20 51 02 CC Okay. And if you'll give us the same kind of comment, hopefully not the same comment but the same type of evaluation when you pick it up this time.

04 20 51 15 LMP Play it a little bit, and we'll talk about it.

04 20 51 54 (Begin music)

04 20 52 15 LMP I can barely, barely hear it.

04 20 53 21 LMP Needs to be just a hair louder.

04 20 53 37 LMP That's good.

(

(GOSS NET 1)

Tape 77
Page 5

04 20 53 49 LMP That will keep me awake.

04 20 54 03 LMP Maybe you ought to crank it back down a little bit.

04 20 54 16 LMP Great.

04 20 54 52 (End music)

04 20 54 53 CC Apollo 8, Houston. How was that?

04 20 54 58 LMP That's real good for background level type, Ken. Maybe you can do some logging in here so that's real nice at that level; maybe for anything else it could be a little bit louder, but that's good for now.

04 20 55 10 CC Okay. That's about the MAX volume we can take down here; so if you want to talk to us, you may have to call us once or twice. You're just barely equaling it.

04 20 55 24 LMP Okay. Try it again, and I'll give you a little louder call; I've been trying to keep it quiet.

04 20 55 30 CC Oh, yes, that's all right. Don't - I was aware you were calling; I just didn't make out what you said. And from now on, any time you call, we'll drop the music, and I'll talk to you.

04 20 55 42 LMP Roger. Don't hesitate for me a bit.

04 20 55 46 CC Right.

04 20 56 00 CC And, Bill, we're going to have to wait until we get around to Bravo before we start switching. Our margin is still a little bit low.

04 20 56 10 LMP Okay. I'll just go ahead and switch it and save you all that trouble.

04 20 56 14 CC Okay. Thank you. Our midnight DVA show's back on the air.

04 20 56 20 LMP Roger.

04 20 56 25 (Begin music)

04 20 57 11 LMP Really great now.

04 21 14 57 CC Apollo 8, Houston. Check your yaw gimbal angle.

04 21 14 58 (End music)

04 21 15 04 LMP You must have been reading my mind.

04 21 15 07 CC No, the DSKY's.

04 21 15 13 LMP Oh, okay.

04 21 15 21 LMP When you go to high gain, would you tell me?

04 21 15 46 LMP Houston, Apollo 8.

04 21 15 53 CC Go ahead, Apollo 8.

04 21 15 56 LMP Ken, do you want me to use the high gain when we come around, or is the OMNI sufficient? It doesn't matter to me.

04 21 16 07 CC Okay. The OMNI is doing fine. I was just watching your middle gimbal angle there; it was getting a little far out.

0 04 21 16 17 LMP Oh, okay. I thought you - I was, too. I thought you said check the DSKY, and I thought you were talking about the high gain antenna.

04 21 16 23 CC No, I'm sorry. I was just watching your middle gimbal.

04 21 16 25 LMP Yes, this thing really slops around in deadband, but it's really nice flying otherwise.

04 21 16 40 CC Glad to hear that.

04 21 16 47 LMP All I have used the while trip is pulse.

04 21 16 54 CC You just woke the doctor up. You said pulse, and he came alive. And he'd like to know if you did in fact, check out the BIOMED harness.

0 04 21 17 07 LMP Yes, I tightened down all the plugs and checked all the leads, and everything looked in order. And when the other fellows wake up, if you remind me, why, I'll give it a more thorough going over.

04 21 17 55 CC Okay, Bill. It's been suggested that they would like to see you try switching the two leads, you know, a yellow and a blue one, and just go ahead and switch them, and they'll sacrifice their pneumogram because they'd rather have the EKG.

04 21 18 25 LMP Do they need it now, or can they wait until somebody else wakes up?

0

(GOSS NET 1)

Tape 77
Page 8

04 21 18 35 CC I guess we can wait, Bill. Is that a hard thing to get to?

04 21 18 43 LMP You have to take your pants off and about everything else - stand by.

04 21 22 07 LMP How's that, Houston?

04 21 22 13 CC Okay. Stand by, Bill. We'll take a look at it.

04 21 22 30 LMP Houston, Apollo 8.

04 21 22 33 CC Roger. Read you. We're looking at data now.
(Laughter)

04 21 22 40 LMP I suppose you'll tell me my heart has quit beating.

04 21 22 44 CC We couldn't argue with you. That doesn't help at all. That's pretty bad.

04 21 23 12 LMP Is the pneumogram NO-GO for entry?

04 21 23 17 CC Roger.

04 21 23 24 CC One thing you might be interested in: we listened to that low speed information that you taped on the first couple of REV's that we thought was going to be unusable. And it must have been a ground problem because it's coming in loud and clear now.

04 21 23 41 LMP Hey, that's great. I was just writing a long dissertation on why we have problems and can't use that DSE in low bit rate. So that's real good.

(GOSS NET 1)

Tape 77
Page 9

I 04 21 23 55 CC Yes, it's coming in loud and clear. Pretty interesting.

04 21 24 00 LMP Let me tell you, it was a hectic revolution.

04 21 25 13 LMP If you've got the music going, I'm not hearing it, Ken.

04 21 25 17 CC No, I was waiting to see what we did on that before I started it up again.

04 21 25 23 LMP Okay. If they could hold off here for a couple of hours, if they have anything at all, just tell them I'm alive, why, I'll give my real good going over here when I get done. I might even make a statement to the world that I haven't noticed that their little amplifiers had gotten hot.

04 21 25 41 CC You say it did get hot?

04 21 25 46 LMP No, I hadn't even noticed it until I started changing the lead.

04 21 25 49 CC Oh, okay. Okay. I'm going to crank the music up again then.

04 21 25 56 LMP Okay. Have they got anything at all down there?

04 21 26 00 CC Well, we're on low bit rate right now, so it'll be a few minutes before we get a chance to take another look at it. We'll let you know if you get sick.

04 21 26 07 LMP Oh, well, we can hold off for a little while.

04 21 26 13 CC Roger.

O

(GOSS NET 1)

Tape 77
Page 10

04 21 27 02

LMP

I can't hear it, but it sounds like something
I'd rather not hear anyway.

END OF TAPE

APOLLO 8 AIR-TO-GROUND VOICE TRANSCRIPTION

(GOSS NET 1)

Tape 78
Page 1

04 22 17 19 (End of music)

04 22 17 40 LMP Houston, Apollo 8.

04 22 17 43 CC Hello, Apollo 8. We interrupt this program of music to bring you the late evening status report.

04 22 17 50 LMP Good. What's up?

04 22 17 56 CC Okay. We are getting ready to have a shift turnover, and I wanted to go over a few items before I do. On the midcourse correction number 6: right now, that looks like it is at most 0.3 a foot per second, so there will be no burn for midcourse number 6. Midcourse number 7 is a little larger, and we'll make a decision on that later. Your weather in landing site still reported as being good and the forecast to be about 2000 scattered and 12 000 broken, about the same numbers they gave Frank earlier. Visibility will be about 10 miles, wave height about 4 feet. And I guess there is some scattered thundershowers, like less than 5 percent, that you should worry about. And they're 10 to 30 percent maybe at 2000, broken as opposed to scattered; so it looks pretty fair. We have got a - -

04 22 19 12 LMP Just my kind of weather.

04 22 19 14 CC Roger. Got a couple of flight plan things to consider. Now number 1 at 119:30: we have got a P52 IMU realignment which we need to slip in ahead

(GOSS NET 1)

Tape 78

Page 2

of the P23 sightings, and that will be an option 3

REFSMAT.

04 22 19 40

LMP

Roger.

04 22 19 45

CC

Okay. Some of the folks in sitting back and looking at the TV business have some ideas about things they would like to see tried with the filters. And I would like to read you what they have here and let you think about it; and in the next 10 hours, you can decide whether or not you think it is worth the effort. Basically, they would like to try using a whole different series of filters - -

04 22 21 04

LMP

Okay, Ken. I got something to write on. Was that P52 at 18:30 or 19:30?

04 22 21 11

CC

119:30.

04 22 21 15

LMP

Okay. I'm ready to copy on TV.

04 22 21 31

CC

Okay. Before you copy, let me read it all through to you here so you will get the feel for what it is we are talking about. The title of this little epistle is "TV and Film Photography Correlation Experiment," and what they want to do is mount the TV camera with the telephoto lens on a bracket in the rendezvous window and take a TV picture of the earth through the red and blue filters, 1 minute per filter; that means red and blue filters individually. Then they would like to take a TV picture of the earth through through the red, in this case, the 25 Alfa filter combined

O

with the polarizing filter. Rotate the polarizing filter through 360-degree increments, again 1 minute per position. Then they'd like to take a TV picture of the moon with the polarizing filter at 360-degree moon-rotation increments and again, 1 minute per position. And to go with this, we would like to have Hasselblad pictures.

04 22 22 44 LMP One minute.

04 22 22 45 CC Okay. I am standing by.

04 22 22 49 LMP Are those - when you were talking about pictures through the polarizing filter, is that the TV pictures through the polarizing filter?

(04 22 22 55 CC That's affirmative. All above was TV.

04 22 22 59 LMP Okay. Now the only thing - the only problem here is it's darn near impossible to aim that television camera; the field of view is so narrow that it took three men and a boy up here to get the thing pointed in the right direction. And we tried using chewing gum for a sight and everything else, and let me tell you that the odds of getting that thing in the earth is pretty small.

04 22 23 25 CC Okay. I think we weren't too clever in our ground callup as to how to point the spacecraft. For one thing I think we can do that a lot better next time now that we have stumbled through it once. I agree with you - -

(

(GOSS NET 1)

Tape 78

Page 4

04 22 23 41 LMP It's not the spacecraft; it's not the spacecraft that's hard to point; it's the camera. The bracket has sufficient slump in it that it can take the camera out of field of view when configured through the window. And it took a lot of microadjustments with a lot of coaching from the ground to get the thing in, and it was a real tough job. So I think you ought to take all this in mind; if you could possibly use the wide angle, you might be better off.

04 22 24 14 CC Okay. I understand what you are saying now. I'll run that back by the TV guys and see what they have to say about that. In conjunction with the above, they wanted to take some Hasselblad pictures of the earth through the rendezvous window with the red and blue filter and black and white film, and then again through the polarizing filter, and this is all going to be used in order to try and correlate the TV and the regular film photography. So if you think it is a worthwhile thing, and you would like to give it a try, I'll run this by Jack and the TV cats and see if they would like to get something out of it with the wide angle, and we can talk about it a little later.

04 22 25 05 LMP Okay. Another thing to keep in mind is that we haven't seen the moon - we didn't see all the way out, and we rarely see it going back. We have seen it once since we left, but we have maneuvered the

wrong way from a sighting attitude to the shortest way to PTC; and to go from an earth view to a lunar view will take quite a bit of time and some RCS.

So you might keep that in mind, too.

04 22 25 35

CC

Okay. I just wanted you to be aware of this and think about it and what its implications to the flight plan might be, and I'll run this wide angle and comment about the moon back by and see which sections they think would be most appropriate.

Okay. On the EMS scroll, Frank wanted us to verify the order that he could expect to see the entry profile, and the first profile that comes up is labelled "Nonexit Number 2" and that is the short-range high-speed entry. The second thing that will come up is entitled "The 3500 Mile" which is also high-speed entry, but it is the one you would use in event we go to the longer entry ranges. Then the third profile will be "Nonexit Entry Number 1," and it will be followed by a fourth 3500 mile. So you have four entry profiles. Numbers 1 and 3, as you come to them, are the short ranges, and numbers 2 and 4 are the long-range scrolls. On coldsoak, I think we talked about what we're going to do there, but somewhere inside of about an hour, we'll want to get into the coldsoak business. We certainly don't want to do it at 12. Talking to the trajectory people - what they thought about water boiling -

(GOSS NET 1)

Tape 78
Page 6

something to keep in mind is the fact that they do see your water dumps and water boiling on your trajectory plot. It seems to be that it's a function of their computational scheme rather than a function of the fact that the trajectory is being perturbed that much. So it looks like one time that we're going to consider, if we're going to do some of this water boiling, we may do it just prior to the midcourse after all the tracking is settled down and they know what the midcourse correction will be. Then in that period just prior to the midcourse we can do it, and they'll pick up their tracking again following the midcourse correction. So if someone proposes that the -- It is probably nice to know that we are not throwing away our data at the most important time, that it is a function of the computer program rather than so much a function of your trajectory being changed.

04 22 28 04 LMP

Let me ask you one thing then. Do you want a coldsoak sometime prior to the midcourse correction for 1 hour. Is that what you're trying to tell me?

04 22 28 12 CC

Not really. I think we are looking at that prior to the midcourse correction as being the time when we would like to check out the water boilers. The coldsoak does involve some water boiler, too, but that's going to be done right before entry when these things are not going to be very sensitive,

(GOSS NET 1)

Tape 78
Page 7

and if we don't do it in 12 hours, it is not real clear where the coldsoak takes place or where you turn on the secondary water boiler. In looking through the entry checklist tonight, we didn't find a place for that.

04 22 28 48 LMP

Okay. Is it really clear that you need the cold soak? We kind of figured on sometime prior to SEP bringing up the secondary EVAP, and also having the primary at that point sometime prior to that date on your suggestion.

04 22 29 06 CC

Okay. We're talking about doing that like an hour prior to SEP; but in the pre-SEP check, one of the things we power down was the secondary loop. And they won't need to turn it back.

04 22 29 21 LMP

We do that to save - -

04 22 29 22 CC

Right. We're doing that to keep our power profile where we want it. And then we're going to be turning it back on sometime prior to entry. And the time to turn it on in entry, of course, isn't specified because as you turn it on, the voltages show that they can hack it.

04 22 29 41 CDR

Hopefully, right after separation.

04 22 29 43 CC

That sounds like a real good place. Okay. I'm sure we're going to discuss that one a little bit more, Bill. But right now those are the kind of things we're talking about doing. And on the high gain, there is still a lot of discussion about

(GOSS NET 1)

Tape 78
Page 8

as to what - exactly what we saw and what it means. And I think it is a little too early to tell you anything about that one.

04 22 30 11 LMP Roger. I think it's got X-ray eyes.

04 22 30 17 CC That's as good as some of the explanations.

04 22 30 26 LMP Yes, I think that's what they hashed out on the ground, Ken.

04 22 30 29 CC Okay. I think we all agree that we don't want to try experimenting with it if we really don't know what it is we're looking at.

04 22 30 39 LMP Roger. I've written down some numbers here that I hope will be helpful.

04 22 30 43 CC Okay. Fine.

04 22 30 46 LMP And I'll give them to you in the debriefing.

04 22 30 49 CC Real fine.

04 22 30 52 LMP I don't think it's any great big deal, because the antenna switching is not hard at all and the ... is required to work; if it doesn't work as advertised, at least it works in a reasonable manner.

04 22 31 26 CC Okay. And we're looking at 120 hours for the next water dump, Bill.

04 22 33 41 LMP Ken, is it my imagination, or do you have the music running?

04 22 33 45 CC I'm sorry; say again.

04 22 33 49 LMP Is it my imagination, or do you have the music running?

(GOSS NET 1)

Tape 78
Page 9

04 22 33 54 CC I think it's your imagination.

04 22 33 59 LMP Uh-oh. Don't let the doctors hear that.

04 22 34 01 CC It's too late; he already heard you.

04 22 34 06 LMP I must be getting that detached feeling.

04 22 36 49 LMP Apollo 8, Houston.

04 22 36 51 CC Go ahead, 8.

04 22 36 55 LMP Roger. Just to make sure the urge to get red and blue filter shots of the moon haven't crept into this TV test. We have got red and blue filter shots of the moon, so you need not worry about that.

04 22 37 12 CC Okay. I don't think that would throw it away. I think we're trying to come up with something definitive so that postflight will have some real good data to compare with what we do on the ground for future work. I would like to have you go over and take a look at the battery Charlie, please.

04 22 37 35 LMP I'm on my way.

04 22 38 08 LMP Okay. Battery Charlie, that's about 36.8 volts.

04 22 38 13 CC Oh, 36.8. Thank you.

04 22 38 19 LMP Roger.

04 22 38 26 LMP Also with respect to the TV test, I would think that we could probably get a pretty good handle on the operation just by taking red and blue and polarizing shots of the earth independent of the TV, but within the same time frame or at about the same range we had the TV last time.

(GOSS NET 1)

Tape 78
Page 10

04 22 38 54 CC Okay. That's what - the second portion of this really is asking that we do this with the Hasselblad, and again we won't be using the red and blue filters so we have our baseline.

04 22 29 08 LMP Taking a picture of the earth with the Hasselblad is no big deal because it does swing by the earth now and then. But trying to get the TV and the Hasselblad all pointed to the earth at the same time would really be tough.

04 22 29 21 CC Roger. I don't think that it's that time-critical, but I'll ask.

04 22 59 15 LMP Houston, Apollo 8.

04 22 59 18 CC Go ahead, 8.

04 22 59 26 CC Go ahead, 8.

04 22 59 29 LMP We're going to hold up on the LiOH change for about a half an hour. The PCO_2 reading is low, and we don't want to wake up the CDR. It's right by his feet.

04 22 59 40 CC Good headwork.

04 23 02 46 CC Apollo 8, Houston.

04 23 02 50 LMP Go ahead, Houston.

04 23 02 53 CC Okay, Bill. We are coming up on the P52 and then the P23 sightings, and there is some concern that if we just go directly to P23 attitude that we are liable to overheat quad Charlie. So we would like to have you maneuver to place the minus X-axis towards the sun now. And I have some gimbal angles

(GOSS NET 1)

Tape 78
Page 11

here for you. And if we take it over there and point the minus X at the sun between now and the time we have to start into the alignment, then the P23 business - we will tend to coldsoak Charlie, and then we will be able to go through the P23 operations without worrying about the temperatures.

04 23 03 45	LMP	Okay. Give me them.
04 23 03 47	CC	Okay. Roll 183.3, pitch 136.7; yaw 13.5.
04 23 04 27	LMP	Right. 183 roll, 137 pitch, and 14 yaw.
04 23 04 31	CC	Okay.
04 23 04 36	LMP	Actually, we worked out up here on Lovell's slide rule and got 183.25 roll.
04 23 06 15	LMP	Houston, you wanted to go to this coldsoak attitude prior to the P52, did you not?
04 23 06 21	CC	We would like to go to the coldsoak attitude now.
04 23 06 27	LMP	And that was to keep from heating up quad D, was it?
04 23 06 30	CC	Negative. That's quad Charlie.
04 23 06 36	LMP	Okay.

END OF TAPE

APOLLO 8 AIR-TO-GROUND VOICE TRANSCRIPTION

(GOSS NET 1)

Tape 79
Page 1

04 23 33 52	CC	Apollo 8, Houston.
04 23 33 57	LMP	Roger, Houston. Apollo 8.
04 23 34 00	CC	Roger. The P23 that is coming up next - we will want to do a water dump as soon as we are through with that P23. We'll dump down to 30 percent, and this ought to be the last dump of the mission. Over.
04 23 34 15	LMP	Okay. You think that we will end up generating enough water to fill her up prior to entry.
04 23 34 20	CC	Affirmative.
04 23 34 31	LMP	Okay. We are at that attitude you gave us, so we stopped the roll a little bit short. We're more like 150 degrees roll right now.
04 23 34 39	CC	Okay, Bill. On that water dump, we expect to have 90 percent.
04 23 34 46	LMP	Okay.
04 23 41 54	LMP	Houston, Apollo 8. Over.
04 23 41 57	CC	Apollo 8, Houston. Over.
04 23 42 06	CC	Apollo 8, Houston. Go.
04 23 42 11	LMP	Roger. We are done with the P52 and arranged for the P23. Was there any constraint you wanted, for length of time you wanted to stay in this attitude?
04 23 42 25	CC	Negative, Bill. When you are finished with P23, we will go back into PTC.
04 23 42 35	LMP	Okay. We are going to maneuver for P23 now.

(GOSS NET 1)

Tape 79
Page 2

04 23 42 38 CC . Roger. We are watching your tank pressures.

04 23 42 43 LMP Okay. Thank you. We will do an optical first
and then do the P23.

04 23 42 46 CC Okay.

04 23 44 51 CC Apollo 8, Houston. We are handing over to Madrid
in about 15 seconds. Over.

04 23 45 58 LMP Roger. And good morning, Jerry, or good after-
noon, or whatever it is.

04 23 45 03 CC Good morning, Jim. It's about 6:30 in the
morning.

04 23 45 35 CC Apollo 8, Houston. How do you read?

04 23 45 40 CMP Loud and clear. How us?

04 23 45 41 CC Roger; the same.

05 00 17 49 CC Apollo 8, Houston.

05 00 17 53 CDR Go ahead, Houston. Apollo 8.

05 00 17 54 CC Morning, Frank. Looks like we have lost the
transducer on the primary radiator OUT tempera-
ture. We are showing an off scale high. The
rest of the loop looks real fine, though. When
you get a chance, would you take a look at it
and see if you're in the same position. Over.

05 00 18 15 CDR Which one is it?

05 00 18 16 CC Primary radiator OUT temperature.

05 00 18 22 CDR Ours is showing 100 off scale high, also.

05 00 18 25 CC Roger.

05 00 21 57 LMP Houston, Apollo 8. Over.